United States Department of the Interior

NATIONAL PARK SERVICE
Joshua Tree National Park
74485 National Park Drive
Twentynine Palms, California 92277-3597

IN REPLY REFER TO:
D30 (8335)

February 2, 2012

Memorandum

To: Regional Director, Pacific West Region

From: Superintendent, Joshua Tree National Park

CC: Alan Schmierer, Regional Environmental Coordinator, Pacific West Region

Subject: CA PRA JOTR 11 (3, 4) Pinto Basin Road Rehabilitation and Reconstruction Phase I and II.

In accordance with National Environmental Policy Act (NEPA) and Director's Order 12, we have completed the environmental compliance for the subject project. The Finding of No Significant Impact (FONSI) has been prepared and clearly and concisely explains why the project will not have a significant effect on the environment. The Errata contains textual corrections to the Environmental Assessment (EA) and provides a Response to Comments.

A copy of the FONSI and Errata will be sent to all those who commented on the EA and all documents will be made available to the public on the Planning, Environment, and Public Comment website at http://parkplanning.nps.gov/JOTR.

I have first-hand knowledge of the project, its impacts and mitigations and I am pleased to recommend it for approval.

National Park Service
U.S. Department of the Interior

Joshua Tree National Park
California

FINDING OF NO SIGNIFICANT IMPACT

PINTO BASIN ROAD REHABILITATION AND RECONSTRUCTION

PHASE I & PHASE II

JOSHUA TREE NATIONAL PARK, CALIFORNIA

January 2012

The National Park Service, in cooperation with the Federal Highway Administration—Central Federal Lands Highway Division, plans to rehabilitate and reconstruct approximately 23.5 miles of Pinto Basin Road at Joshua Tree National Park (the park), which lies within Riverside and San Bernardino Counties, California. The National Park Service (NPS) completed an environmental assessment that provides an analysis of the environmental consequences of the alternatives considered. The environmental assessment (EA) was prepared in accordance with the National Environmental Policy Act of 1969 and implementing regulations, Council of Environmental Quality regulations 40 Code of Federal Regulations Parts 1500-1508; and National Park Service Director's Order #12 and Handbook, Conservation Planning, Environmental Impact Analysis, and Decision-making.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to improve road safety conditions, to provide improved visitor access within the project area, and to implement the improvements in a way that minimizes impacts to the park's natural and cultural resources. The project is needed because the pavement is extensively cracked, potholed, and patched, and had reached the end of its service life. Pavement in the project area is over 30 years old, thin (1 to 2 inches), and structurally inadequate for the heavy loading caused by increasing numbers of large recreational vehicles. Soil on the road shoulders is very sandy and soft. Inattentive drivers can drift into soft shoulders, where they frequently get stuck and on rare occasion are involved in rollovers. Pinto Basin Road has several abrupt hills, steep slopes, and sharp curves that result in difficult driving and poor sight distance. The poor alignment along hills or steep slopes, inadequate drainage, and periodic flooding can also create hazards for motorists. Thirty-six personal property accidents, 19 auto accidents, and two fatalities can be directly attributed to these road conditions. Additionally, the park's 1995 *General Management Plan* identified the need to rehabilitate aging and deteriorated pavements, many of which are 30 or more years old and have effectively reached the end of their service lives.

SELECTED ALTERNATIVE

Alternative B (identified as the preferred alternative in the EA) for implementation, with minor modifications in Project timing as noted below, is selected for implementation. The selected alternative involves rehabilitating, widening, and realigning the existing 23.5-mile section of Pinto Basin Road, and includes modifying the existing 20- to 22-foot-wide paved road to a 24-foot-wide road. The design speed of the modified roadway will range from 25 to 45 miles per hour, depending on the location. The majority of roadway rehabilitation under the proposed action will occur within the existing road bench. Realignment will occur within four areas to improve the sight distance: the Cholla Cactus Garden, the Porcupine Wash area, Pinkham Canyon Road intersection, and an area south of the Cottonwood Visitor Center. Within the roadway bench, curves, dips, and rises will be reconstructed to improve superelevation (or cross slope) and smooth out the ride. Low water crossings will be engineered in a manner which protects the roadway during flood events, and constructed within the existing roadway bench. All existing wayside pullouts and designated parking areas will be formalized for safety. Informal pullouts and parking areas will be obliterated and will be restored using live plantings and mulching. The existing roadway will be pulverized and overlain with new pavement. The overall new and permanent disturbance associated with the Pinto Basin Road reconstruction project will be approximately 6.2 acres. This disturbance area includes reconstruction of curves including Cholla Cactus Garden, the Porcupine Wash area, Pinkham Canyon Road intersection, and an area south of the Cottonwood Visitor Center, as well as expansion of the Cholla Cactus Garden parking area. New disturbance areas are adjacent to the roadway, but outside the existing asphalt, shoulders, and berms, and total 6.2 acres. Approximately 1 acre of previously disturbed areas (part of existing paved areas, shoulders, and berms) will be reclaimed / revegetated so as to return natural conditions.

Implementation will occur in two phases. Phase I will extend from the northern limits of the project area (approximately 1 mile north of Cholla Cactus Garden) south for approximately 12.25 miles. Phase II will extend approximately 11.25 miles from the terminus of Phase I to the southern end of the project area (south of the Cottonwood Visitor Center). Work for Phase I is anticipated to commence in 2013 (rather than during 2012 as projected in the EA). Phase II will likely commence in 2014-2015. Details of Phase I and Phase II are as follows.

Phase I

Parking Areas / Waysides. Parking areas with wayside interpretive signage to be reconstructed include Cholla Cactus Garden and Turkey Flats. Each of these parking areas / waysides will be paved and striped, and would include concrete curbing. The existing wayside signage will be relocated. The wayside parking areas will accommodate four to six vehicles.

The Cholla Cactus Garden wayside parking area will be expanded approximately 20 to 30 feet on the south side and paved. The expansion will result in less than 1 acre of overall disturbance (primarily cholla cactus). The expansion will increase vehicle parking to 20 to 30 spaces, including two to three spaces for large recreational vehicles. The expansion will also improve entrance and exit safety at the wayside. The parking area will be closed to visitors during construction. Cholla cactus removed for the roadway realignment will be salvaged to the extent feasible and transplanted to areas identified for revegetation within Cholla Cactus Garden.

Pullouts. The following four existing gravel surface pullout areas will be formalized: Silver Bell Mine, Geology, Ocotillo, and Paleo. The standard pullout area will accommodate about four parked cars. Two of these pullouts will also accommodate a parked school bus. All pullouts will be paved and curbed. The concrete curbs will have a heavy broom finish and a curb cut every 100 feet for desert tortoise (*Gopherus agassizii*) passage.

Boulders will be placed within (or surrounding) pullouts to control access and unauthorized parking. Interpretive signs at pullouts will be relocated as needed to allow for parking improvements. Aging existing signs will be replaced, and new wayside signs may be added.

Low Water Crossings. Phase I includes up to 19 low water crossings. Gabion baskets will be used on the downstream side of some low water crossings. Some low water crossings will have gabions on both the upstream and downstream sides. Excavation for gabions will be minimal and only to the depth required to correctly place the gabions. Native material will be placed on top of the gabions after construction. Low water crossings will be designed to maintain the existing drainage patterns. Boulders will be placed along the low water crossings to prevent motorists from deliberately driving off the roadway into the wash. Boulders will be park/government provided. The locations of boulders will be determined based on visual examination of the roadway.

Road Realignments. Road realignment / reconstruction will occur within the Cholla Cactus Garden area. The reconstruction area extends from just east of the Cholla Cactus Garden wayside approximately 1.25 miles west. The realignment / reconstruction of this area is needed to improve sight distances and curve safety. Approximately 3 acres of clearing and grubbing of previously undisturbed areas (newly disturbed) along the realignment will be required. Portions of the existing roadway (approximately 0.5 acre) that will no longer be part of the alignment will be rehabilitated by removing all pavement material. These portions of the roadway will be revegetated with vertical mulching (placing dead plant material in the ground), direct seeding, and planting of salvaged and transplanted native plants.

Road Intersections. Pinto Basin Road intersects with Black Eagle Mine Road and Old Dale Road (both of these roadways intersect Pinto Basin Road at the same location). A paved apron will be added at this intersection.

Road Rehabilitation. Road rehabilitation along all other portions of the project area not described above will consist of pulverizing the existing pavement and sub-base, and shaping, compacting, and finishing the roadbed to the required roadway template. The roadway will be repaved. All roadway rehabilitation work will occur within the existing roadway bench.

Upon completion of roadway rehabilitation and reconstruction, a fog seal will be laid down to lock in fines and fill surface voids to extend the life of the pavement surface. Fog seal is a commonly used sprayed liquid emulsion, usually a mixture of asphalt and water, which dries within several hours. Because fog seals are used to enrich pavement surfaces and hold stone in place, they are suitable for use on deteriorating and new pavement surfaces. The fog seal will be applied to one lane of the roadway at a time to allow for drying and allow one lane of traffic to remain open. The roadway areas undergoing treatment will be checked for presence of the Mojave population of the desert tortoise by a tortoise monitor prior to spraying (2011).

Slope Erosion Area. To address erosion which has occurred on the eastern side of Pinto Basin Road, the 6-foot-by-10-foot culvert at the southern end of the project area will be recontoured and stabilized using erosion matting to reconstruct the slope and reduce future erosion. A curb and riprap rundown will also be used to convey water from the roadway to an existing drainage path down the slope.

A torrential rainstorm caused widespread flooding along Pinto Basin Road on September 13, 2011. Due to damage from this flood event, certain low water crossings and slope erosion areas at Pinkham and Smoke Tree Washes are to be repaired in 2012 under an Emergency Flood Repair project (pending available funding) rather than later as projected in the EA.

Traffic Control and Access. Construction vehicles will access the project area from either the southern park entrance along Pinto Basin Road or from the north entrance along National Park Drive to Pinto Basin Road. The construction contractor will have a traffic plan in place prior to construction. Pilot cars will be used for one-way traffic control. Traffic delays up to 30 minutes will be expected.

Staging Areas. Staging Areas will consist of the Turkey Flats wayside area and the Range Borrow Pit area. The Range Borrow Pit area is approximately 3 miles north of the northern end of the Pinto Basin Road project area. This area also has been used for construction staging for previous roadway projects. The Range Borrow Pit may be used as a staging area with limits and use determined by park staff prior to construction. The contractor will not have free access to the entire site.

The eastern half of the Turkey Flats pullout area will remain open to visitors during construction and staging. The western half will be used for staging and stockpiling purposes as well as a disturbed area north of the wayside sign / kiosk. Limits and use of the Turkey Flats staging area will be determined by park staff prior to construction activities.

Existing pullouts may be used for staging during Phase I construction activities. The construction contractor will keep every other pullout open during construction to allow for visitor parking.

All staging areas will be chosen due to their proximity to the project area and their previously disturbed state or status. Temporary tortoise fencing will be installed at all staging areas.

Phase II

Parking Areas / Waysides. The Porcupine Wash parking area with wayside interpretive signage will be reconstructed. The Porcupine Wash wayside will be paved and striped, and will include concrete curbing. The parking area will accommodate up to six vehicles, and the existing interpretive signage will be relocated.

Pullouts. Three existing gravel surface pullout areas will be formalized to accommodate four cars, and impacted areas beyond the existing footprint will be reclaimed. These pullouts are Desert Governor, Only a Visitor, and Desert Wash. Each pullout will be paved and curbed. The concrete curbs will have a heavy broom finish and a curb cut every 100 feet for desert

tortoise passage. The Desert Governor pullout will accommodate a parked school bus and four parked cars, and the Desert Wash pullout will accommodate a parked school bus and six parked cars. The Only a Visitor pullout will be a standard four-car pullout. There are also four existing pullouts that will be eliminated and reclaimed (or restored).

Boulders will be placed within (or surrounding) pullouts to control access and unauthorized parking. Interpretive signs at pullouts will be relocated as needed to allow for parking improvements. Aging existing signs will be replaced.

Low Water Crossings. Phase II will include up to six low water crossings. As in Phase I, gabion baskets will be used on the downstream side of some low water crossings. Some low water crossings will have gabions on both the upstream and downstream sides. Sub-excavation for gabions will be minimal (less than 2 feet). Low water crossings will be designed to maintain the existing drainage patterns.

Boulders will be placed along the low water crossings in areas where vehicles could potentially drive off the roadway into the wash. The locations of boulders will be determined based on visual examination of the roadway.

Road Realignments. Road realignments / reconstruction will occur at the Porcupine Wash area and an area south of the Cottonwood Visitor Center, in order to improve sight distances and curve safety. The reconstruction area within the Porcupine Wash area will be approximately 0.5 mile (curves). Approximately 1.3 acres of clearing and grubbing of previously undisturbed areas along the realignment will be required. Portions of the existing roadway (approximately 0.3 acre) that will no longer be part of the alignment will be rehabilitated as described above for the Cholla Cactus Garden area.

The area south of the Cottonwood Visitor Center will require cut slope modifications to improve the roadway geometry, sight distances, and visitor safety. The roadway in this area will be widened to the inside of the curve and will cut into the existing hillside. An existing culvert within the curve area will be extended by approximately 10 feet along the west side of the roadway. The reconstruction area south of the Cottonwood Visitor Center will be less than 0.25 mile. Approximately 0.7 acre of clearing and grubbing of previously undisturbed areas along the realignment will be required.

Additionally, smaller curves and hills or steep slopes with limited or restricted sight distance along Pinto Basin Road will be reconstructed. These areas of realignment will require clearing and grubbing of about 2 acres of previously undisturbed areas. Approximately 0.2 acre will no longer be part of the alignment and will be rehabilitated / revegetated.

Road Intersections. Approximately 0.3 mile of the Pinto Basin Road and Cottonwood Springs Road intersection will be relocated (approximately 100 to 200 feet west of Cottonwood Springs Road / Cottonwood Visitor Center) to provide adequate sight distance.

The intersection of Pinto Basin Road and Pinkham Canyon Road has poor sight distance for vehicles coming from Pinkham Canyon Road on either side. To increase sight distance, Pinkham Canyon Road will be slightly realigned with a paved apron to intersect with Pinto

Basin Road at a 90-degree angle. The Pinkham Canyon Road intersection also has a low water crossing which will be reconstructed with riprap placed on both sides of the roadway apron to improve water flow. This work will occur within previously disturbed areas of the roadway.

Cottonwood Visitor Center. To prevent unauthorized or illegal parking along Pinto Basin Road west of the Cottonwood Visitor Center, concrete curbing will be added around the visitor center parking lot as well as the island (vegetated area) west of the visitor center. The existing curbs will be adjusted to allow for turning movements of large vehicles.

Road Rehabilitation. Road rehabilitation along all other portions of the project area not described above will consist of pulverizing the existing pavement and sub-base. Road rehabilitation will also consist of compacting and finishing the roadbed to the required roadway template. The roadway will be paved. All roadway rehabilitation work will occur within the existing roadway bench.

Upon completion of roadway rehabilitation and reconstruction, a fog seal (same as described above) will be laid down to lock in fines and fill surface voids to extend the life of the pavement surface. The roadway areas undergoing treatment will be checked for presence of the Mojave population of the desert tortoise by a tortoise monitor prior to spraying.

Traffic Control and Access. Construction vehicles may access the project area from either the southern park entrance along Pinto Basin Road or from the north entrance along Utah Trail Boulevard to Pinto Basin Road. The construction contractor will have a traffic plan in place prior to construction. Pilot cars will be used for one-way traffic control. Traffic delays will be expected to be approximately 30 minutes.

Staging Areas. Staging Areas may include the Turkey Flats wayside area, the Range Borrow Pit area, and Pinkham Canyon Road. Previously disturbed areas adjacent to Pinkham Canyon Road will also be used for construction staging. This area is currently being used for storage of roadway materials.

Existing pullouts may be used for staging during construction activities. The construction contractor will keep every other pullout open during construction to allow for visitor parking.

All staging areas will be chosen due to their proximity to the project area and their previously disturbed state or status.

OTHER ALTERNATIVES CONSIDERED

The EA also analyzed the No-action Alternative, which consists of routine, continuing maintenance and repairs and implementing previously approved plans. In other words, the No-action Alternative describes the day-to-day operations of running the park, and does not imply or direct discontinuing day-to-day maintenance and repairs or stopping previously approved plans. The No-action Alternative would mean the existing use and maintenance of Pinto Basin Road would continue and current structural and safety issues would remain. Travel lanes would remain at the current width; sight distance at Cholla Cactus Garden, the Porcupine Wash area, Pinkham Canyon Road intersection, and an area south of the

Cottonwood Visitor Center would remain limited; sight distances along the roadway would continue to be limited in some areas; existing wayside pullouts and designated parking areas would not be improved for safety; and informal pullouts and parking areas would remain.

ALTERNATIVES CONSIDERED BUT DISMISSED

Federal Highway Administration analysis determined that rehabilitation was the most appropriate, cost-effective treatment for Pinto Basin Road. Therefore, a total reconstruction of the road was considered, but dismissed.

Alternative designs and speeds at Cholla Cactus Garden were dismissed, as they represented a duplication of another less environmentally damaging and less expensive alternative.

Different curving alignments were considered, but were dismissed because of their inability to meet the project's purpose and need and their noncompliance with the park's *General Management Plan.*

RATIONALE FOR SELECTED ALTERNATIVE

The selected alternative improves visitor safety—the primary purpose of the project. The Preferred Alternative also meets the National Park Service guidelines for sustainable design because of the following design and construction practices that:

- minimize impacts to natural and cultural resources by conducting work primarily within the existing road prism,
- preserve topsoil for use in post-construction reclamation; and
- transplant and reuse vegetation in post-construction reclamation.

Had the No-action Alternative been selected, the Pinto Basin Road would continue to deteriorate, resulting in potential safety issues to park visitors and disruption of park operations, and maintenance costs could increase.

THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

According to Council on Environmental Quality guidelines, the Environmentally Preferable Alternative is the alternative that will promote the national environmental policy as expressed in §101 of the National Environmental Policy Act, which considers:

1. fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;

2. assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

3. attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;

4. preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;

5. achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and

6. enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources.

The EA determined that the Preferred Alternative was Environmentally Preferred because it best met the evaluation criteria above. The Preferred Alternative protects public and employee health, safety, and welfare by addressing safety concerns associated with poor sight distance while selecting a design that minimizes impacts to the Mojave population of the desert tortoise and cholla cactus (criteria 2, 3, and 5); prevents damage to natural and cultural resources by providing larger formal turnouts in high use areas (criteria 1, 3, and 4); and improves park operational efficiency and sustainability by reducing ongoing road maintenance needs and the consumption of depletable resources associated with such maintenance (criteria 1 and 6).

The No-action Alternative only minimally meets three of the six criteria (1, 5, and 6) and does not meet the other criteria because it does not provide for safe visitor experiences.

MITIGATION MEASURES

Joshua Tree National Park places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protections of natural and cultural resources and the quality of the visitor experience, the mitigation measures identified below will be implemented as part of the selected alternative.

The NPS will monitor the construction process to help ensure that protective measures are being implemented and are evaluated to determine if they are achieving their intended results. For example, actions with the potential to affect the Mojave population of the desert tortoise will be reviewed by the park wildlife branch chief. Table 1 presents mitigation measures required for successful implementation of the selected alternative.

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TABLE 1. MITIGATION MEASURES TO BE IMPLEMENTED

Resource / Topic	Mitigation Measures
General Measures Responsibility Project Manager	• The National Park Service and Federal Highway Administration project managers will ensure that the project construction remains confined within the parameters established in the compliance documents and that mitigation measures are properly implemented. • All protection measures will be clearly stated in the construction specifications and workers will be instructed to avoid conducting activities beyond the construction zone, as defined by the construction zone fencing. This does not exclude necessary temporary structures such as erosion control fencing. • All tools, equipment, barricades, signs, and surplus materials will be removed from the project work limits upon project completion. Construction debris will be hauled from the park to an appropriate disposal location. Any asphalt surfaces damaged due to work on the project will be repaired to original condition. All demolition debris will be removed from the project site, including all visible concrete and metal pieces. • Contractors will be required to properly maintain construction equipment (e.g., mufflers to minimize noise). • A hazardous spill plan will be in place, stating what actions will be taken in the event of a spill and preventive measures to be implemented, such as placement of refueling facilities, storage, and handling of hazardous materials. • All equipment on the project site will be maintained in a clean and well-functioning state to avoid or minimize contamination from mechanical fluids. All equipment will be checked daily. • Material stockpiling, machinery storage, and vehicle parking will be permitted only in designated areas. • Concrete and asphalt plants will be located outside the park. No overnight storage of these materials will be permitted. • Traffic delays that result from construction activities will be limited to a 30-minute maximum in one direction through the project area. • No lane closures will occur on the weekends from Friday 6:00 P.M. through Monday 6:00 A.M. No work will occur on recognized federal holidays. • Work hours will be from dawn to dusk to avoid the increased potential for accidents after dark.

Resource / Topic	Mitigation Measures
General Measures Responsibility Project Manager	• To allow the work to continue with minimal traffic safety concerns, lane closures will occur on weekdays and one-way traffic with pilot cars and flaggers will be used. • Any project-related vehicle or equipment operating on unpaved roads will not exceed a speed limit of 25 miles per hour. • Cross-country (off-road) travel will not be authorized, except under life-threatening / emergency situations.
Air Quality Responsibility Project Manager	• Construction activities will be coupled with water sprinkling to reduce fugitive dust emissions. Water sprinkling will occur as needed on active work areas where soil or fine particles are exposed. • Idling of construction vehicles will be limited to reduce construction equipment emissions. Unnecessary idling of all construction vehicles will be avoided throughout the construction period.

Geological Resources – Soils
Responsibility
Project Manager
Vegetation Specialist
	• Erosion and sediment control will be required. Topsoil will be removed from areas of construction and stored for later reclamation use.
	• Best management practices for drainage and sediment control, as identified and used by the Federal Highway Administration and the National Park Service, will be implemented to prevent or reduce non-point source pollution and minimize soil loss and sedimentation in drainage areas. Use of best management practices in the project area for drainage protection will include all or some of the following actions, depending on site-specific requirements:
	  • Keep disturbed areas as small as practical to minimize exposed soil and the potential for erosion.
	  • Locate waste and excess excavated materials outside of drainages to avoid sedimentation.
	  • Install silt fences, temporary earthen berms, temporary water bars, sediment traps, stone check dams, or other equivalent measures (including installing erosion-control measures around the perimeter of stockpiled fill material) prior to construction.
	  • Conduct regular site inspections during the construction period to ensure that erosion-control measures were properly installed and are functioning effectively.
	  • Store, use, and dispose of chemicals, fuels, and other toxic materials in an appropriate manner.
	  • Revegetate disturbed areas as soon as possible after construction is completed.

Resource / Topic	Mitigation Measures

Vegetation – Native and Non-native
Responsibility
Project Manager
Vegetation Specialist
	• A variety of native plants will be removed, stored in temporary nurseries, and relocated to reclaimed areas, both during the project and following completion of the project.
	• Revegetation work will use soil conserved along the corridor and native species from genetic stock originating in the park. Revegetation efforts will also attempt reconstruction of the natural spacing, abundance, and diversity of native plant species.
	• The estimated 6.2 acres (for Phases I and II) of newly disturbed areas during construction will be mitigated through revegetation of approximately 1 acre of existing disturbed areas no longer needed as part of the roadway alignment. Revegetation will be accomplished through use of locally collected plant species (seeds and transplants). Control of non-native and invasive plant species will occur before and after construction activities.
	• Vegetation disturbance will be minimized by replacement of topsoil in as near the original location as possible, scarification, mulching, and seeding / planting with species native to the immediate area.
	• Reclaimed / revegetated areas will be monitored after construction to determine if efforts are successful or if additional remedial actions are necessary.
	• Remedial actions could include installation of erosion-control structures, reseeding and / or replanting the area, and controlling non-native plant species.
	• In an effort to avoid introduction of non-native / noxious plant species, no imported topsoil or hay bales will be used during revegetation. On a case-by-case basis, the following materials may be used for any erosion-control dams that may be necessary: certified weed-free rice straw, cereal grain straw that has been fumigated to kill weed seed, and wood excelsior bales.
	• Undesirable plant species will be controlled in areas determined to be high-priority by park staff, and other undesirable species will be monitored and controlled as necessary. To prevent the introduction and minimize the spread of non-native vegetation and noxious weeds, the following measures will be implemented during construction:
	  • Minimize soil disturbance.
	  • Pressure wash and / or steam clean all construction equipment to ensure that all equipment, machinery, rocks, gravel, or other materials are cleaned and weed free before entering the park.
	  • Cover all haul trucks bringing asphalt or other materials from outside the park to prevent seed transport.

Resource / Topic	Mitigation Measures
Vegetation – Native and Non-native Responsibility Project Manager Vegetation Specialist	• Limit vehicle parking to existing roadways, parking lots, or access routes. • Limit disturbance to roadsides and culvert areas, including limiting equipment to the roadbed area. No machinery or equipment should access areas outside the construction zone. • Obtain all fill or rock from the project area, if possible. If not possible, weed-free materials will be obtained from sources outside the park, which will need to be approved by National Park Service. • Monitor disturbed areas following construction to identify growth of noxious weeds or non-native vegetation. Treatment of non-native vegetation will be completed in accordance with National Park Service-13, *Integrated Pest Management Guidelines*.
Federally Listed Species and Species of Special Concern Responsibility Project Manager Wildlife Biologist	• Only authorized biologists will provide oversight of all activities within the roadway corridor. Authorized biologists are responsible for being aware of the most current U.S. Fish and Wildlife Service protocols and guidelines for desert tortoise. National Park Service will submit the names and qualifications of proposed authorized biologists to the U.S. Fish and Wildlife Service for review and approval at least 15 days prior to initiation of ground-disturbing events. No project-related activity will commence unless one or more authorized biologists have been selected. • An individual will be designated the field contact representative to oversee project compliance and coordination. The field contract representative will be either the authorized biologist or a desert tortoise monitor—approved by the authorized biologist—who is on-site at the time. The field contact representative will coordinate with the U.S. Fish and Wildlife Service and be authorized to halt any activity that may endanger desert tortoise. • The field contact representative will be present during all monitoring / survey efforts and construction activities that may affect desert tortoise or desert tortoise habitat. • Presence / absence surveys will be conducted prior to construction. Clearance surveys will be conducted one week to 10 days prior to commencement of any construction / rehabilitation activities. All potential desert tortoise burrows within 100 feet of construction or staging areas will be examined. At the completion of construction activities, all materials used to mark or identify the tortoise burrows will be promptly removed.

Resource / Topic	Mitigation Measures
Federally Listed Species and Species of Special Concern Responsibility Project Manager Wildlife Biologist	• Temporary tortoise-proof fencing will be established around all staging areas. Details of tortoise fencing requirements can be found in the biological assessment (National Park Service 2011). Fence placement and construction will be supervised and approved by the field contact representative. All tortoise fencing will be dismantled and transported from the site following project completion. Temporary fencing established around staging areas will be inspected at least weekly and corrective action taken to maintain the integrity of the tortoise barrier. Fenced staging areas will include a desert tortoise exclusion gate. This gate will remain closed at all times, except when vehicles are entering or leaving the staging area. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open as long as a monitor is present. This monitor will report any tortoise activity to the authorized biologist who, in turn, will take appropriate remedial actions. • Pullouts will be paved and curbed. The concrete curbs will have a heavy broom finish and a curb cut every 100 feet for desert tortoise passage. • Construction vehicles parked overnight along the side of the road in pre-existing turnouts will be checked for the presence of desert tortoise prior to moving the vehicle in the morning. Construction crew members will visually survey under the vehicles, from all four directions, to assure that a tortoise did not move under the vehicle. If a tortoise is found, the authorized biologist will be contacted immediately. • The contractor must prevent injury to the desert tortoise at sites with potential hazards (e.g., auger holes, steep-sided depressions) by installing exclusionary fencing around open pits or other hazardous sites. • A desert tortoise education program will be presented by the field contact representative to all construction personnel prior to any construction activities. Following the onset of construction activities, any new employees will be required to formally complete the tortoise education program prior to working on-site. At a minimum, the tortoise education program will cover the following topics: (1) desert tortoise distribution / occurrence, (2) general behavior and ecology, (3) sensitivity of the species to human activities, (4) legal protection, (5) penalties for violation of state or federal laws, (6) reporting requirements, and (7) project protective mitigation measures. • The field contact representative will maintain a complete record of all desert tortoise encounters. The record will include location, date, time, life stage, general condition, identification numbers, and action taken. Within 90 days following the completion of the project, a report of all field contact representative activities and actions will be submitted to the U.S. Fish and Wildlife Service.

Resource / Topic	Mitigation Measures
Federally Listed Species and Species of Special Concern Responsibility Project Manager Wildlife Biologist	• A litter control program will be implemented during construction to eliminate the accumulation of trash to avoid attracting ravens that may prey on juvenile desert tortoise. All trash and food items will be promptly contained in raven- and coyote-proof containers provided by the contractor. These containers will be transported off park lands on a regular basis once filled. • The Monitoring Program for desert tortoise will continue along Pinto Basin Road as well as other portions of the park. National Park Service provides funds to the U.S. Fish and Wildlife Service to be part of the range-wide monitoring program. • Potential roadside habitat for small species, consisting of naturally formed rock piles, will be replaced upon completion of project construction activities. These rock piles will be of varying sizes, consistent with the size of rock piles removed during construction activities. Park staff will direct placement of rocks by the contractor at Old Dale / Black Eagle Mine Road.
Recreation Resources Responsibility Project Manager Public Information Officer	• Visitors and bus drivers will be advised in park announcements, programs, and publications that there will be temporary inconveniences from construction work on the road. • In all cases, traffic control and safety shall be maintained. • The construction contractor shall include proposed daytime work protocols in its Quality Control Plan and its Safety Plan to show how traffic monitoring and controls will be implemented.
Archeological Resources and Cultural Landscapes Responsibility Project Manager Cultural Resource Specialist	• Construction work in proximity to National Register-eligible sites or cultural landscapes will be subject to monitoring by a professional archeologist. • Should unknown archeological resources be uncovered, or should a cultural landscape feature be discovered, during construction, work will be halted in the discovery area, the site will be secured, and park staff will be consulted according to 36 Code of Federal Regulations 800.13 and 43 Code of Federal Regulations 10. • In compliance with the Native American Graves Protection and Repatriation Act of 1990, work will be halted and National Park Service will also notify and consult concerned American Indian tribal representatives for the proper treatment of human remains, funerary, and sacred objects should these be discovered during the project. • Archeological specimens found within the construction area will be removed only by National Park Service archeologists who meet the Secretary of Interior's Standards, or their designated representatives.

WHY THE SELECTED ALTERNATIVE WILL NOT SIGNIFICANTLY AFFECT THE QUALITY OF THE HUMAN ENVIRONMENT

As defined in 40 Code of Federal Regulations 1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect may be beneficial.

No major adverse or beneficial impacts were identified that will require analysis in an environmental impact statement. Actions taken under the selected alternative will result in the following adverse and beneficial effects.

The project will have no or negligible impacts to the following: geohazard / natural hazards, soundscapes, air quality, water quality / quantity, streamflow characteristics, floodplains, wetlands and riparian habitats, land use, ethnographic resources, museum objects / collections, historic structures, socioeconomics, environmental justice, Indian trust assets, and wilderness.

The project will contribute short- and long-term, moderate, adverse impacts to soils, vegetation, and species of special concern. The project will contribute short-term, moderate, adverse impacts to wildlife and visitor use / experience and visitor safety. The project will also contribute short- and long-term, minor, and adverse impacts to park management / operations.

The project will contribute long-term, negligible, adverse impacts to cultural landscapes and minor, adverse impacts to archeological resources.

The project will contribute short- and long-term, minor, beneficial impacts to soils and vegetation. The project will also contribute long-term, moderate, beneficial impacts to visitor use / experience and visitor safety, and long-term, minor, beneficial impacts to park management / operations.

The short-term impacts identified above are those that will occur only during construction.

The degree to which the proposed action affects public health and safety.

Rehabilitation and reconstruction of Pinto Basin Road will have a long-term, beneficial impact to visitor safety by improving roadway conditions, shoulders, sight distance, and parking within waysides. Rehabilitation and reconstruction would also result in improvement of overall roadway safety.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

There are no prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas in the project area.

Critical habitat, an ecologically critical area, has been designated for the desert tortoise within the park. Designated critical habitat for this species occurs within 2 miles of the project area. Park lands acquired from the Bureau of Land Management in 1994 (under the California Desert Protection Act) were previously designated as critical habitat for desert tortoise while under Bureau of Land Management jurisdiction. Park lands managed prior to 1994 (e.g., Pinto Basin Road area) were not designated as critical habitat because of the U.S. Fish and Wildlife Service's determination that these areas were already sufficiently protected due to NPS policies, mandates, and the Organic Act. The entire park was designated as a Desert Wildlife Management Area, and all suitable habitats for the desert tortoise in the park should be considered critical habitat (pers. comm. with Michael Vamstad 2010). The entire road project slated for reconstruction is located within moderate- to high-quality desert tortoise habitat.

As described in the EA, project impacts to archeological sites will be minor and adverse. The project design includes features to avoid and minimize impacts to National Register-eligible cultural sites. Management recommendations, including construction monitoring, will ensure avoidance of impacts to National Register-eligible archeological sites within the project area.

Impacts to the setting and viewshed of the Hexie Mountain Mining Historic District cultural landscape will be negligible and adverse. The reconstructed alignment may encroach upon portions of the access road to Golden Bee Mine. Best management practices, project design, and mitigation measures as outlined under the selected alternative will be implemented.

The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.

No highly uncertain, unique, or unknown risks were identified during either preparation of the environmental assessment or the public comment period.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

As described in the EA, cumulative impacts were determined by combining the impacts of the Preferred Alternative with other past, present, and reasonably foreseeable future actions.

Projects Contributing to Cumulative Impacts

Past Actions. Past projects include: the rehabilitation and reconstruction of Keys View Road from the Park Boulevard intersection (Route 12 near Cap Rock) to Keys View Overlook; chip seal of Indian Cove and Black Rock roads; chip seal of Pinto Basin Road from approximately mile post 31 to mile post 37; development of the Cottonwood Springs Visitor Center; Joshua Tree National Park *Fire Management Plan*; Joshua Tree National Park *Backcountry and Wilderness Management Plan*; rehabilitation of Park Boulevard (Route 12) from Quail Springs picnic area to Cap Rock intersection; and rehabilitation of Park Boulevard (Route 12) from the Cap Rock intersection to Geology Tour Road.

Present and Future Actions. Present actions include: maintenance of Pinto Basin Road (e.g., pothole repair, shoulder grading, shoulder edge repair); archeological and biological resource surveys along Pinto Basin Road; recreational activities, including camping, hiking, wildlife viewing, and use of paved and unpaved roads by visitors; maintenance of visitor facilities (e.g., wayside signs, restrooms, parking areas and pullouts); implementation of the Joshua Tree National Park *Fire Management Plan* (2005); and implementation of the Joshua Tree National Park *Backcountry and Wilderness Management Plan* (2000). Future actions include: mine closures (abandoned mine lands to be closed); update of the 1995 *General Management Plan*; rehabilitation and chip seal of other park roads; and installation of new wayside exhibits. Private and public lands adjacent to the park are currently and will likely continue to be subjected to increased development and urbanization.

The environmental assessment evaluated cumulative impacts for each of the resources affected by the proposed action considering the actions and projects listed above. There were no cumulative adverse impacts exceeding the major level of intensity threshold.

For many of the resources analyzed (geology-soils, vegetation, wildlife, and federally listed species), cumulative impacts will be moderate adverse and minor beneficial. Impacts to visitor use / experience and visitor safety will be moderate adverse and moderate beneficial. Impacts to cultural and historical resources will be minor adverse, and impacts to park management / operations will be minor adverse and minor beneficial. There will be no cumulative impacts that will rise to a level of significance.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic places or may cause loss or destruction of significant scientific, cultural, or historical resources.

As described above, project impacts to archeological sites will be minor and adverse. Impacts to an archeological site will result in little loss of important information potential.

Impacts to the setting and viewshed of the Hexie Mountain Mining Historic District cultural landscape will be negligible and adverse, as described above. Overall, the majority of the landscape sites and features will not be impacted.

The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.

The project design, construction methods, and mitigation measures will ensure that impacts to threatened or endangered species or their critical habitat do not exceed a level of intensity of moderate adverse impact. Under §7 of the Endangered Species Act, the action is determined to *may affect, but not likely to adversely affect* the Mojave population of the desert tortoise. Project design and monitoring of construction activities provide assurance that construction will not impact this federally listed species. Revegetating approximately 1 acre of the existing roadway alignment with native seeds and transplanting native plant species will result in the rehabilitation of habitat and provide beneficial effects to the desert tortoise.

Whether the action threatens a violation of federal, state, or local law imposed for the protection of the environment.

The selected alternative violates no federal, state, or local environmental protection laws.

PUBLIC INVOLVEMENT AND AGENCY & TRIBAL CONSULTATION

The park conducted internal scoping at park headquarters on November 30 and December 1, 2009, to discuss proposed improvements for a 24-mile stretch of Pinto Basin Road. In addition to park staff, the meeting was attended by Pacific West Region, Denver Service Center, and Federal Highway Administration/Central Federal Lands Highway Division. Proposed improvements discussed included those related to safety, utilities, permits, environment, survey, right-of-way, geotechnical, pavements, hydrology / hydraulics, and highway design.

Park staff conducted an additional internal scoping meeting on October 26 and 27, 2010, to discuss the 50 percent design; purpose and need for the project; possible alternatives; potential environmental impacts; past, present, and reasonably foreseeable future projects that may have cumulative effects; and possible mitigation measures. As occurred previously, the meeting was also attended by staff from Pacific West Region, Denver Service Center, and Federal Highway Administration—Central Federal Lands Highway Division. Park staff also held internal meetings to discuss and review conditions along the roadway.

Additionally, the park initiated public scoping by issuing a press release on January 10, 2011, describing the proposed action and inviting the public to participate in the planning process. The press release was issued widely, including local and regional newspapers, radio and television stations, and local government offices. The only comment received during the initial public scoping period (ending February 11, 2011) was from the Soboba Tribe, which requested additional information and stated their interest in the project. The Tribe was sent a copy of the EA during the public review period, and a follow-up response letter from the park.

In accordance with the Endangered Species Act, the park contacted the U.S. Fish and Wildlife Service regarding federally listed species on August 13, 2010, and again on November 1, 2010. A biological assessment was submitted to the U.S. Fish and Wildlife Service for review as part of Endangered Species Act formal §7 consultation. In their letter dated December 20, 2011, the U.S. Fish and Wildlife Service concurred with the determination of *may affect, but not likely to adversely affect* for the desert tortoise.

In accordance with §106 of the National Historic Preservation Act, the park initiated consultation with the California State Historic Preservation Officer (SHPO) with the submittal of a summary of impacts to cultural resources (Finding of No Adverse Effect). The Assistant State Archeologist, Trevor Pratt, requested additional clarification on the SHPO submittal in an email to the park on July 21, 2011. The park conducted a conference call with Mr. Pratt on July 26, 2011, to answer questions and identify additional information needed for completing project review. The park submitted this additional narrative and graphics to Mr. Pratt and the SHPO on August 29, 2011, restating the NPS Finding of No Adverse Effect. After review of all documents and supporting materials, Mr. Pratt provided verbal approval to park staff on October 28, 2011, to proceed with the project. Based on this consultation, the NPS has concluded that the proposed undertaking will be No Adverse Effect to cultural resources.

Consultation was initiated with 14 Native American tribes in December 2010 to determine if there were any ethnographic resources in the project area and if they wanted to be involved in the environmental compliance process. The letters sent to the tribes on December 22, 2010, informed them of the project, and NPS requested the tribes' preliminary comments regarding ethnographic concerns. The draft EA was sent to the tribes during the public scoping period. The Agua Caliente Tribe requested additional information, which the park provided.

The environmental assessment was released for a 30-day public review on July 13, 2011. A press release announcing the availability of the document was distributed to various agencies, tribes, members of the public on the park's mailing list, and local news media. Printed copies of the EA were made available at the park's visitor center and electronic copies were posted on the NPS Planning, Environment and Public Comment website *http://parkplanning.nps.gov.*

A public meeting was held the evening of July, 28, 2011, at the park's Black Rock Visitor Center, 9800 Black Rock Canyon Road, Yucca Valley, California. National Park Service staff was on hand to discuss the proposed alternatives and to answer questions. Site visits were conducted prior to this meeting on July 26 and July 27, 2011. An additional public meeting was held the morning of September 16, 2011, to provide information on the NPS preferred alternative and next steps for the Pinto Basin road project.

During the 30-day public review, seven comment letters were received from six private individuals in addition to the letter sent by the Agua Caliente Tribe noted above. Four individual respondents provided minor comments which reiterated information received during scoping.

One individual observed that the proposed road straightening has the potential to destroy large numbers of very old, large Cholla plants unnecessarily. The viability of transplanting large Cholla specimens, as proposed, has not been documented. Traffic calming devices or increasing the parking area should be considered in lieu of straightening the road in the vicinity of Cholla Cactus Garden.

Response: Several alternatives were considered during the planning phase. Straightening the road in this location provides the safest access for visitors, while limiting the impacts to the Cholla cactus and other native vegetation. Speed limits on Pinto Basin Road will vary between 25 and 45. Traffic calming devices would not correct structural deficiencies in the road, and would therefore not meet the purpose and need of the project. Joshua Tree National Park has a long established native plant revegetation program, and salvage and transplanting cacti will be accomplished during Phase I as described above.

Regarding whether new road curbing eliminating safe parking is a benefit to the safety or enjoyment of visitors, another individual contended this paved public roadway should allow the public to safely pullout out of the traffic lane onto a shoulder with enough space to safely park. Public parking should not be forced into "formalized pullouts" restricting where visitors may choose to stop. A dedicated bike lane or paved shoulders wide enough to provide for the safe passage of any motorized vehicle should be added. Bicycle use was also thought to be overlooked.

Response: Curbing will be limited to formal pullouts and parking areas, which are provided throughout the length of Pinto Basin Road. Vehicles, including bicycles, will still be able to access road shoulders in an emergency situation. Removing informal pullouts will lessen impacts to sensitive cultural and natural resources in proximity to the road. Widening the pavement will meet the project purpose and need to provide safe access by all vehicles. However, as explained above, expanding the width of the road (full reconstruction) was considered and dismissed.

CONCLUSION

The NPS, in cooperation with the Federal Highway Administration, will rehabilitate and reconstruct approximately 23.5 miles of Pinto Basin Road at Joshua Tree National Park. The improvements will occur in two phases. Phase I will extend from the northern limits of the project area (approximately 1 mile north of Cholla Cactus Garden) south for approximately 12.25 miles. Phase II will extend approximately 11.25 miles from the terminus of Phase I to the southern end of the project area (south of the Cottonwood Visitor Center).

Based on the environmental assessment's analysis of issues and alternatives, consideration of public and agency comments, the ability of the mitigation measures to avoid and/or minimize adverse impacts, and the concurrence of agencies of authority, the National Park Service will implement the Pinto Basin Road project as described above. The selected alternative does not constitute an action that would normally require preparation of an environmental impact statement. The selected alternative will not have a significant impact on the human environment. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the selected alternative will not violate any federal, state, or local environmental law.

Based on the foregoing, it has been determined that an environmental impact statement is not required for these actions, and project Phases I and II will be implemented as soon as practicable.

Recommended: Mary A Burns 2/3/2012

Superintendent — Date
Joshua Tree National Park

Approved: _____

Regional Director — Date
Pacific West Region

Attachment 1

DETERMINATION OF NO IMPAIRMENT

PINTO BASIN ROAD REHABILITATION AND RECONSTRUCTION PHASES 1 AND 2

While Congress has given the National Park Service (NPS) management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the NPS must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the NPS. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The impairment of park resources and values may not be allowed by the NPS unless directly and specifically provided for by legislation or by the proclamation establishing the park. The relevant legislation or proclamation must provide explicitly (not by implication or inference) for the activity, in terms that keep the Service from having the authority to manage the activity so as to avoid the impairment.

The impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated. An impact that may, but would not necessarily, lead to impairment may result from visitor activities; NPS administrative activities; or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

National Park Service's *Management Policies 2006* requires analysis of potential effects to determine whether or not actions would impair park resources. The park resources and values that are subject to the no-impairment standard include:

- the parks scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the parks role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Based on enabling and wilderness legislation, legislation of October 1994, and biosphere reserve status, the purposes of Joshua Tree National Park are to:

- protect and interpret areas, sites, structures, and various artifacts associated with occupations by prehistoric, historic, and contemporary Native American groups, historic miners, and subsistence cattle ranchers
- protect and interpret the biologically diverse examples of the Mojave and Colorado desert ecosystems
- serve as a natural laboratory for understanding and managing the Mojave and Colorado desert ecosystems
- preserve the character and values of wilderness in the park
- provide visitors with opportunities to experience and enjoy natural and cultural resources through compatible recreational actives.

Based on the 1916 Organic Act, and as identified in the Joshua Tree National Park GMP topics evaluated for impairment include geological (soils) resources, vegetation resources (including non-native species), wildlife, federally listed species and species of special concern, and archeological resources.

NATURAL RESOURCE TOPICS

Geological Resources - Soils

The landscape within the park consists of mountain ranges, desert basins, and rock piles. Most soils in the park are poorly developed. The eastern half is mostly alluvial with no true soil structure. This granitic fill ranges from boulders to gravel and coarse sand. These are modern deposits consisting of fan gravel and other alluvium being deposited by drainage systems. There are no known rare or unique soils in the park.

Under the Selected Alternative, clearing and grubbing (during construction activities) of approximately 6.2 acres of newly disturbed areas, will result in disturbance and removal of soils. Road rehabilitation and reconstruction involved in excavation, grading, and exposure of soil material increase the potential for erosion. Revegetation of approximately 1 acre of disturbed areas along the roadway would provide long-term and beneficial impacts to soils. Mitigation measures and Best Management Practices incorporated into the Selected Alternative will protect disturbed areas from erosion and compaction. The Project will not result in impairment of soil resources because adverse impacts are temporary, approximately 1 acre of disturbed areas will be revegetated, and mitigation measures will reduce impacts.

Vegetation

Vegetation within the Pinto Basin Road proposed project area consists primarily of creosote shrub community vegetation, with the following vegetation associations: Arizona upland Sonoran desert scrub; lower bajada and fan Mojavean-Sonoran desert scrub; Mojavean semi-desert wash scrub; North American warm desert bedrock cliff and pavement; Mojavean upper desert scrub; and Sonoran-Coloradan semi-desert wash woodland / scrub.

Several non-native invasive species occur throughout the park, primarily along roadways and trails. Many of these species migrate along the roadway through motorized and non-motorized seed dispersal.

Roadway reconstruction and rehabilitation would primarily occur within the existing disturbed roadway bench. Total new soil disturbance would be approximately 6.2 acres under the Preferred Alternative. Revegetation of approximately 1 acre of disturbed areas along the roadway would occur. Mitigation measures are also incorporated under the Preferred Alternative to minimize impacts to vegetation within the project area. Any cholla cactus removed for the roadway realignment would be transplanted to areas identified for revegetation within the Cholla Cactus Garden.

The Preferred Alternative would affect a small portion of vegetation species populations in the project area and result in short-term changes to plant species composition. Invasive species would likely increase in only limited locations along the roadway. The Preferred Alternative would not result in impairment of vegetation because adverse impacts would be addressed by mitigation measures including revegetation of disturbed areas and controlling invasive species.

Wildlife

A number of wildlife species are known to occur within or adjacent to the project area. Wildlife known to occur includes large and small mammals, reptiles, and bird species. Under the Preferred Alternative, roadway reconstruction and rehabilitation (construction) activities would result in potential impacts to wildlife, such as: clearing and grubbing of approximately 6.2 acres of undisturbed areas resulting in loss of habitat; harm or disruption of behavior during construction activities; noise disturbance; and temporary displacement. The majority of construction activity would occur within the existing roadway areas of disturbance (existing roadway bench). Mitigation measures to minimize the disturbance area, monitoring during construction, and revegetation of approximately 1 acre along the roadway would reduce the potential for adverse impacts. The Preferred Alternative would not result in impairment of wildlife resources because adverse impacts would be temporary and mitigation measures would be implemented to avoid and reduce impacts.

Federally Listed Species and Species of Special Concern

Consultation with the USFWS identified one federally listed threatened species, the Mojave population of the desert tortoise, known to occur within the project area. There are 15 species

of special concern known to occur within the project area. These species include: Bendire's thrasher; Le Conte's thrasher; yellow warbler; pallid bat; western mastiff bat; pallid San Diego pocket mouse; Nelson's bighorn sheep; rosy boa; Alverson's foxtail cactus; Coves' cassia; Hall's tetracoccus; Jarwood's milk-vetch; Las Animas colubrine; Little San Bernardino Mountains linanthus; spear-leaf matelea; and thorny milkwort.

Under the Preferred Alternative, the Proposed Action would result in impacts to desert tortoise and species of special concern. Impacts from construction activities to tortoise would include: clearing and grubbing of 6.2 acres of undisturbed areas resulting in loss of habitat; potential direct harm and disruption of behavior during clearing, grading, and trenching activities; disturbance by noise or vibrations from heavy equipment; damage to soil and cryptogams on the periphery; incidental death of unseen tortoise along roads, beneath crushed vegetation, or in undetected burrows; destruction of burrows; handling of tortoise; entrapment of tortoises in pits or trenches; attraction of ravens and facilitation of their survival by augmenting food or water; fugitive dust; and toxins from exhaust.

Implementation the Preferred Alternative would result in a may affect, not likely to adversely affect determination for the desert tortoise and park-determined critical habitat. No USFWS designated desert tortoise critical habitat would be impacted. Species of special concern could be disturbed or displaced during construction activity. Impacts would occur to the approximately 6.2 acres of undisturbed areas needed for roadway reconstruction; however, the majority of construction activity would occur within the existing disturbed roadway bench. Approximately 1 acre of the existing roadway alignment no longer needed would be rehabilitated by removing all pavement material and revegetating with native seeds, and transplanting native plant species. This would result in rehabilitation of potential habitat for desert tortoise and species of special concern. In addition, mitigation measures would be implemented to minimize disturbance outside the roadway bench, monitor for desert tortoise and species of special concern, and avoid or minimize impacts to these species. The Preferred Alternative would not result in impairment of the federally listed desert tortoise or species of special concern because the adverse impacts would be temporary and would be mitigated by implementation of specific mitigation measures.

Archeological Resources

An archeological resources survey was conducted in the fall of 2010. Based on a records search provided by the park, there were 64 isolates and 10 sites previously recorded within the search boundary. During the survey, archeologists recorded 135 new isolates and 40 new sites within the proposed project area. Under the Preferred Alternative, total new disturbance would be approximately 6.2 acres. Surface disturbance associated with construction activities under the Preferred Alternative would generally occur in previously disturbed areas. Best management practices, project design, mitigation measures as outlined under the proposed action, and consultation as applicable would be conducted to avoid impacts to National Register-eligible cultural sites. To reduce the potential for impacts, construction work in proximity to National Register-eligible sites would be subject to monitoring by a professional archeologist. The Preferred Alternative would not result in impairment of archeological resources because known sites would be avoided and monitoring and mitigation measures would be implemented to reduce the potential for adverse impacts.

SUMMARY

As described above, adverse impacts anticipated as a result of implementing the Preferred Alternative on a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, key to the natural or

cultural integrity of the park or to opportunities for enjoyment of the park, or identified as significant in the park's general management plan or other relevant NPS planning documents, would not rise to levels that would constitute impairment.